

REMARKS

Claims 1, 6, 11, 17, 22 and 27 have been amended. Upon entry of the amendment, claims 1-11 and 13-31 will be pending in the application. Applicants note that the independent claims have each been amended to remove a limitation previously added by amendment and to add a limitation previously recited in the dependent claims. Correspondingly, Applicants submit that the amendments listed above raise no issues since the amendment simply reflects a limitation that was already present in a dependent claim of the original claims. Reconsideration of amended claims 1-11 and 13-31 is respectfully requested in view of the following remarks.

Section 112, First & Second Paragraph, Rejections:

The Examiner rejected claims 1-11 and 13-31 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, and under 35 U.S.C. § 112, second paragraph, as indefinite. Although Applicants traverse these rejections, Applicants submit that they are moot in view of the cancellation from independent claims 1, 11 and 22 of the limitation to which the rejections were directed.

Section 103(a) Rejection:

The Examiner rejected claims 1-11 and 13-31 under 35 U.S.C. § 103(a) as being obvious over Kowert (U.S. Patent 5,649,129) (hereinafter, "Kowert"). Applicants traverse this rejection for at least the following reasons.

With respect to amended claim 1, Kowert fails to teach or suggest a system including data capture logic configured to capture data events from a nondeterministic data bus; a system memory including a plurality of addressable locations, wherein a subset of the plurality of addressable locations is configured as a data event buffer; a direct memory access (DMA) transfer engine coupled to the data capture logic and to the system memory and configured to perform a DMA transfer operation of the captured data

events from the data capture logic to a region of the data event buffer as portions of the captured data events become available from the data capture logic; and an application configured to retrieve captured data events from the region of the data event buffer without the DMA transfer operation of the captured data events from the data capture logic to the region being stopped, such that the application is configured to display the retrieved data events substantially in real time with respect to the occurrence of the corresponding captured data events on said nondeterministic data bus.

Applicants note that while Kowert discloses the existence of DMA logic 402 within FPGA 304, Kowert does not disclose the operation of DMA transfers in any detail whatsoever. At col. 19, lines 6-7, Kowert mentions that “[t]he microprocessor 124 executes a software routine to retrieve data from the FIFO 300 on a regular basis,” without mention of whether or not this functionality occurs through the intervention of DMA logic 402. Kowert further does not disclose any aspect of how captured data events may be displayed once retrieved. Kowert broadly states that a GPIB analyzer may capture data from a GPIB bus for “display and analysis.” However, this does not amount to any sort of recitation of specific structure or functionality of a system that would give rise to such display or analysis.

As such, Kowert fails to disclose the specific configuration of the system recited in amended claim 1. That is, Kowert fails to disclose a system in which a DMA transfer engine performs a DMA transfer of captured data events into a region of a data event buffer of a system memory as portions of the captured data events become available from the data capture logic, and in which an application retrieves captured data events from the data event buffer region without the DMA transfer operation being stopped. The mere mention of DMA functionality in Kowert fails to meet the specific requirements of claim 1. Claim 1 specifically requires that DMA transfers of captured data events into a data event buffer are not stopped while an application retrieves captured data events from that buffer. Kowert makes no such provision.

A similar argument applies to amended claims 11 and 22, which recite limitations similar to claim 1. Thus, Applicants submit that amended independent claims 1, 11 and 22 are distinguishable over Kowert.

With reference to claims 2, 3, 13, 14, 20, 23, 24 and 30, the Examiner states that Kowert does not disclose the limitation where the data event buffer is circular or linear, but that “one of ordinary skill would readily recognize that a circular or linear buffer is well known in the art, thereby making use of these types of well known buffers obvious to one of ordinary skill.” Applicants traverse the Examiner’s statements and reiterate arguments made in response to similar statements of the Examiner made in the previous Office Action. Applicants note that the Examiner has made no attempt to rebut Applicants’ previous arguments with respect to these claims.

These features may be well known in other contexts. However, as the Federal Circuit stated in *In re Kotzab*, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000):

Most if not all inventions arise from a combination of old elements. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. (emphasis added)

Thus, the Examiner’s assertion that circular and linear data event buffers are well known does not establish that the prior art teaches Applicants’ specifically claimed application of these elements in combination with the other claimed elements. The evidence of record does not indicate the desirability of circular and linear data event buffers as combined in Applicants’ claims. Moreover, as the Court of Appeals for the Federal Circuit recently explained in *In re Sang Su Lee*, Docket No. 00-1158 (Fed. Cir. January 18, 2002), conclusory statements such as those provided by the Examiner that a claim limitation is well known or common knowledge do not fulfill the Examiner’s obligation. “Deficiencies of the cited references cannot be remedied by the [Examiner’s] general conclusions about what is ‘basic knowledge’ or ‘common sense.’” *In re Zurko*, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). “Common knowledge and common sense ... do

not substitute for authority.” *In re Sang Su Lee*. Common knowledge “does not in and of itself make it so” absent evidence of such knowledge. *Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc.*, 51 USPQ2d 1415, 1421 (Fed. Cir. 1999). Thus, Applicants submit that the rejection of these claims is improper.

With respect to claims 9, 20 and 30, the Examiner states that “Kowert teaches having a sample index value for the captured data events, therefore, it would have been obvious that transmissions related to the sample index value is performed via a DMA transfer.” Notwithstanding the fact that the Examiner has failed to provide any support for this assertion, and making reference to the comments in the previous paragraph, Applicants fail to discern any necessary connection between a sample index value and a DMA transfer. Moreover, Applicants note that claims 9, 20 and 30 recite additional limitations with respect to pausing DMA transfer activity dependent upon a sample index value, which behavior is neither disclosed nor suggested by Kowert. Applicants note that the Examiner has made no effort to rebut these arguments, which were submitted by Applicants in response to the previous Office Actions.

Applicants further note that numerous ones of the dependent claims recite additional features not taught or suggested by Kowert. However, as the rejection of the independent claims has been shown to be unsupported by the cited art, no further discussion of the dependent claims is necessary at this time.

CONCLUSION

Applicants submit the application is in condition for allowance, and prompt notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5150-84100/RCK.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Notice of Change of Address
- ☐ Other:

Respectfully submitted,



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